Washington State Energy Strategy Update/
2003 Biennial Energy Report

The 1993 State Energy Strategy (SES) began with a set of Guiding Principles. The principles were meant to serve as "a set of common principles and objectives" developed by the 1993 energy strategy committee. The 1993 Strategy addressed all aspects of state energy use from electricity to transportation while the current strategy focuses almost exclusively on electricity issues. Although many of those guiding principles still remain relevant, the Washington State Department of Community, Trade and Economic Development (CTED) asked the 2002 SES Advisory Committee to revisit them especially in light of the major changes in the electricity landscape since the original strategy. The guiding principles (in bold) represent a general consensus by the members of the advisory committee. The principles range from relatively general statements of direction for state energy policy to fairly specific statements on significant electricity issues of particular importance to Washington. CTED Energy Policy staff produced the narrative following each principle.

Guiding Principle #1

Encourage all load serving entities to adopt integrated resource plans to ensure they have adequate resources to meet their obligation to serve their customers' projected long term energy and capacity needs.

During the later half of the 1990s many states began to investigate whether they should shift their electrical systems from a regulated monopoly-based utility system where consumers could only receive electricity service from a single utility provider to a retail open access structure, which would allow consumer choice of their electricity provider. This process is often referred to as electricity deregulation or restructuring. Several western states notably California, Oregon, and Montana chose to adopt some level of open retail access. Washington State has chosen not to move in that direction and in light of the California restructuring debacle, it is very unlikely that we will do so anytime in the foreseeable future. Consequently, load-serving utilities with an explicit obligation to serve all customer loads will remain the predominant structure for electricity supplied to Washington consumers.

The Pacific Northwest states have a long history of using integrated resource tools and plans (IRP) as a basis for utility resource and planning decisions. The 1990 Northwest Power Act helped to establish the IRP approach and the Northwest Power Planning Council (NWPPC) used IRP as a key element in its regional electricity planning process. Many consumer-owned utilities have depended on IRP as their principal planning tool. In addition, the Washington Utilities and Transportation Commission requires that its regulated utilities regularly develop and adopt integrated resource plans. (WAC 480-100-238: Least cost planning)

The primary purposes of this principle are to:

- Reaffirm the continued predominance of load serving utilities as the state's electricity service model;
- Underscore the continuing obligation that the state's utilities have to serve their customer's load requirements and to acquire the resources necessary to do;
- Recognize that current and future electricity markets are likely to experience greater uncertainty, market volatility, and increased risk than has historically occurred, and
- Acknowledge that integrated resource planning provides the best general method for utilities to ensure that they can serve their customer current and future needs.

Guiding Principle #2

Encourage the development of a balanced, cost-effective and environmentally sound resource portfolio that includes conservation, renewables (e.g., wind, geothermal, hydro, biomass, and solar technologies), and least-cost conventional resources.

This principle is a corollary to Principle #1. Principle #2 expands on the concepts set forth in principle #1 by focusing both on the types of new resources that should be developed and the underlying principles of integrated resource planning. If we expect Washington utilities to acquire the resources they need, we also expect them to do so in the most environmentally sensitive and cost effective manner possible. While conservation is always the resource of choice it would be too expensive for all of our need for more electricity to be met through conservation. Similarly, although many renewable resources such as wind power are often cost competitive with gas fired combustion turbines, it is not clear that we can rely upon renewables to cost-effectively meet the rest of our need for new resources. Therefore, a balanced portfolio of conservation, renewables and fossil-fuel generation will be needed to meet our increasing electricity loads. Integrated resources plans by utilities along with the NWPPC's Regional Power Plan will enable utilities to meet local and regional needs in the least risky, most cost-effective and environmentally sensitive manner possible.

Guiding Principle #3

Protect the benefits to Washington consumers from the Federal Columbia River Power and Transmission System (FCRPS)

This principle acknowledges that Washington State and the Pacific Northwest have received considerable benefits from the presence of the Federal Columbia River Power and Transmission System. Electricity prices have historically been among lowest in the United States, in large part due to the preeminent role of the federal hydroelectric and transmission system in the region. The Bonneville Power Administration (BPA) supplies half of Washington's electricity and Washington buys half of BPA's output. When BPA, which markets the power from the federal dams, raised its wholesale rates last year in response to the drought and electricity crisis of 2000-01, the shock was felt throughout the region and especially in Washington. It is very much in the interest of Washington consumers for BPA to be financially healthy and to be able to supply power to us at a low cost over the long run.

Washington's access to the FCRPS cannot be taken for granted. As a federal resource the FCRPS has often been the object of covetous efforts by other parts of the country. For example, in recent years, the Midwest/Northeast Alliance has attempted to dilute those benefits through calls for market based rates and privatization of BPA. Therefore it is also in Washington's interest to work with all other stakeholders in the region to allocate the output of the federal system in a manner that is fair to all consumers in the region, respects BPA's public stewardship roles, and provides long-term contracts so both BPA and the region's utilities can plan for their responsibilities within a relatively stable framework.

Northwest consumers of electricity are paying off the debt of the federal hydroelectricity system. Although we are not the owners of the system, we are the payers of the mortgage. If, working with BPA and other regional stakeholders, we prove ourselves to be worthy stewards of the system, we can claim an entitlement to the benefits of the system.

Guiding Principle #4

Preserve and promote WA's cost-based energy system to benefit the end use consumer by providing reliable power and reduce consumers' vulnerability to supply shortage and

price volatility. At the same time, the state should promote policies that harness market forces in the wholesale energy market to reduce customer costs and increase reliability while protecting the environment.

This principle acknowledges that the 2000-01 electricity crisis resulted in major disruption – higher electricity prices, negative impacts on business and industry, more residential shutoffs, and a more volatile market. It focuses on two aspect of the electricity system – retail service to homes, businesses, and industry, and wholesale markets that directly serve utilities and some large industrial customers.

Since the 1993 energy strategy, the electricity landscape has changed significantly. Beginning with the 1993 Energy Policy Act, the federal government set in motion a major change in the wholesale electricity market by ordering the opening up of the transmission system to wholesale sellers of electricity including independent power producers. As noted in the discussion of Principle 1, some states chose to respond to this change in federal law by restructuring their electricity systems by separating ownership of distribution systems from generation and allowing some or all consumers to buy power from suppliers other than their own local utility. These changes in state law have resulted in a greater role for market forces throughout the western United States. There are still great disputes over the extent to which the specific restructuring path taken in California contributed to the electricity crisis of 2000-01 and the extent to which the greater reliance on energy markets in general contributed to the crisis. We may never know the answers to these questions, but Washington continues to be extremely cautious about increasing our reliance on market forces to provide for our electricity supply.

While we assume that our current regulated and public utility structure will remain the model for the foreseeable future in WA, we acknowledge that some form of market structure will have a role in wholesale electricity generation and transmission. What that role will be is still very much an open question. We want to capture the benefits of competition without accepting the volatility and uncertainty that fully deregulated electricity markets tend to exhibit. This is a difficult balancing act and governments throughout the worlds are struggling to find the right mixture of competition and regulation. At the same time Washington has to resist the attempts by the Federal Energy Regulatory Commission (FERC) to impose its vision of the future on the Northwest, while developing an alternative vision that ensures the viability of independent power producers in a capital limited low-electricity market

Guiding Principle #5

Encourage utilities, BPA and others as they work to reduce congestion and improve the reliability of the transmission system, to assess all potentially practicable and cost-effective alternatives, including but not limited to targeted demand reductions, generation additions, system upgrades, and new line construction.

Principle #5 focuses on a critically important issue for the electricity future of the state and region. BPA controls and operates the vast majority of the region's electric transmission facilities. Because BPA has such a dominant position in the region's transmission system, its decisions on system upgrades and transmission alternatives will dominate the future direction of transmission.

The Northwest and the U.S. have both experienced significant increases in the use of the electricity transmission grid over the last several years. This increase, coupled with limited major transmission upgrades over the last 15 years, has resulted in growing concerns about line congestion, access to transmission services, and system reliability. There are now underway

two distinct sets of responses to these problems. One is a complete reform of the governance of the transmission system. FERC is advancing this governance reform. FERC is pushing for Regional Transmission Organizations (RTOs) to be created throughout the U.S. in order to oversee an orderly expansion of the transmission system and to develop a fair and rational market for transmission services. It is not at all clear that this policy is in the interests of the electricity consumers of Washington and Washington energy officials have expressed concerns about the formation of a northwest RTO.

The other set of responses to transmission problems is to address, regardless of governance structure, the necessity for expansion of the system, the careful study of whether alternative siting of generation will replace the need for more transmission and vice-versa, and whether both new transmission and generation can be avoided altogether through reduction of central generation by conservation, efficiency, and distributed generation. All of these policy objectives can be achieved either through the current governance structure of the transmission system—e.g., congressional approval of borrowing authority for BPA so BPA can finance transmission additions—or through an RTO framework. Washington's challenge is to determine how to achieve these policy objectives in the face of political and jurisdictional struggles over governance.

Guiding Principle #6

Foster a predictable and stable investment climate to facilitate adequate and efficient access to capital markets for independent power producers, federal agencies and Washington's public and private energy industry.

Electricity system investments, be they in generation, distribution, transmission, or energy efficiency, are by their very nature capital intensive. Consequently access to capital markets is critical to the future viability of the state's electricity system. Capital availability for electricity systems activities has tightened considerably in 2001 and 2002. On the federal system, BPA has begun to approach the limits of its federal borrowing authority creating a situation that could make it very difficult for the region to upgrade and expand its transmission system. Increased wholesale power costs, declines in demand, and the collapse of the wholesale spot market have threatened both public and private utilities' ability to borrow and their credit ratings have suffered. In the wake of the Enron collapse, the financial position of independent power producers is extremely precarious.

The state is quite limited in its overall ability to directly or significantly influence capital availability for the electricity industry. Nonetheless, there are a few things the state can do.

- Public officials can reassure capital markets that Washington's regulated utilities are being regulated in a financially responsible manner.
- The state of Washington can conduct is own fiscal affairs in an exemplary manner.
- State audits of locally governed utilities should be thorough and ensure the transparency necessary to assure investors.

Guiding Principle #7

Promote Washington State as a leader in clean energy technologies by supporting and attracting companies that are active in developing, manufacturing and selling them. In addition, lead by example with clean energy, energy efficiency, and sustainable practices in state and local government operations.

This is a two-part principle that addresses state efforts and targeted economic development strategies and the role of state and local government as both market place and modeler of desired business and operational practices.

Supporting the Clean Energy Industry

In 1997 CTED commissioned a study to determine the extent of the renewable energy and energy efficiency industry in Washington (*The Next Generation of Energy: The Renewable Energy and Energy Efficiency Industries in Washington State)*. That study concluded that the nearly billion-dollar clean energy industry is roughly comparable in size to the state's wholesale apple industry. In addition, future markets for advanced energy technologies such as fuel cells, solar photovoltaics, and wind, coupled with a need to significantly improve the efficiency of how we use energy and electricity, mean that both domestic and international markets are vast. Consequently, the Locke administration has chosen the clean energy industry as one of its business development focus areas. CTED is already beginning to direct energy policy, economic development, and trade resources toward maintaining and building the industry.

Sustainable Government

In September 2002, Governor Locke issued Executive Order 02-03 Sustainable *Practices by State Agencies*, which directed state government to serve as an exemplar for sustainable practices. The order requires each executive branch agency to develop a sustainability implementation plans. Among the practices are actions that minimize energy and water use by state agencies and encourage a shift to clean energy for both facilities and vehicles.
State and local governments are also an important marketplace. The installation of energy conservation products and measures, the purchase of renewable energy, and the implementation of sustainable practices will provide a market for providers of those goods and services thus stimulating the development of that market.

Guiding Principle #8

Use data and analysis based on sound scientific and economic principles to inform energy policy.

This principle is essentially self-explanatory. It recognizes that both scientific and economic analyses are integral components of any carefully developed energy policy. The analytical work of the NWPPC which includes evaluation of electricity demand and supply balances, projection of energy resource costs, environmental assessment, and conservation resource estimation is a prime example of the role of scientific and economic analysis and data in energy policy development. Because of the limited analytical capabilities of the state of Washington, we depend significantly on the work of the NWPPC especially the periodic Regional Power Plans it develops. For this update of the SES, we depended on the Council's draft materials developed for their 5th Power Plan.

Guiding Principle #9

Evaluate energy policies by how well they improve the safety, security and reliability of the system.

The purpose of this principle is to acknowledge the added importance of energy security issues in the state's energy policy considerations. The events of September 11, 2001, have resulted in an increased emphasis on infrastructure security issues. Our electrical and energy systems are key element of those security concerns. Maintaining the safety, security, and reliability of our energy systems security is vital to maintaining a functional society.

Energy emergency planning and response are not a new activity for either state government or CTED. CTED has explicit statutory responsibilities to plan for and respond to energy emergencies (RCW 43.21G) and regularly works with the energy industry and all levels of government on these issues. The September 11th, terrorist events have added a new dimension to those responsibilities. The Governor's Committee on Terrorism is charged with developing a comprehensive plan to address terrorism concerns in the state. A CTED chaired subcommittee is focusing on the utility infrastructure issues.

While there is an increased emphasis on security, the principle reminds us that we still have to address ongoing concerns about reliability. Energy policy makers and planners need to ensure that the lights stay on through droughts, ice storms and transmission failures. Thus, when considering how to best meet our needs for transmission and generation, we need to consider, in addition to other considerations, how each proposed solution affects the reliability of the entire electricity system.

Guiding Principle #10

Educate the public on energy issues.

The electricity crisis of 2000-01 resulted in nearly unprecedented citizen and media focus on electricity and energy issues. As a result of the crisis, Washington citizens and businesses began to recognize that electricity, a commodity that we tend to take for granted, was vital part of the state's economic well-being. Our energy literacy certainly increased during this period. The challenge ahead for the state and the electricity industry is to maintain and increase that level of literacy. Energy and electricity issues are inherently complex involving topics as diverse as resource economics, energy technology, finance, environmental assessment, and governmental structure.

At present there is no systematic energy and electricity education program in the state of Washington. There are many training, education, and technical assistance resources that address specific areas such as energy literary of building operators or industrial energy hotlines. Should we try to develop something or are current resources sufficient?

Some of the electricity specific areas that should be included are:

- How does the electricity system work?
- What are the relationships between electricity supply and demand?
- What actions can individuals, businesses, and industries take to influence electricity demand and usage?
- What are the key characteristics and issues related to new generation technologies, (costs, locational constraints, environmental impacts, capital needs, etc.)?

- Who has responsibility and authority for energy decisions? - Government and at what level – local, state, regional, or national? Private sector – businesses, industries, energy companies, independent power producers, finance community?

Guiding Principle #11

Actively engage with nearby states, provinces, tribes, and the federal government to help accomplish common energy goals.

Washington's electricity and energy system does not exist in isolation. We are tied together with the western U.S. and western Canada through an extensive series of transmissions lines. Despite our abundance of hydroelectric generation within our state borders much of our electricity and the vast majority of our other energy resources come from out of state. With the exception of the Centralia coal mine, Washington possess no significant fossil fuel resources and is dependent on imports from Alaska for most of our petroleum and on Canada and the Southwest for our natural gas supplies. Electricity moves throughout the Northwest, from coal-fired plants in the Rocky Mountain region, and on a seasonal exchange basis from California and the Southwest.

The federal government has a large role in our electricity system. The Army Corp of Engineers and the Bureau of Reclamation own and operate many of the region's largest hydroelectric dams and BPA owns nearly three-quarters of the region's transmission assets. At the national level efforts are underway to pass the most significant national energy legislation since 1992. The FERC regulates the interstate transmission system and is pushing hard to expand its control through creation of RTOs and promulgation of a standard market design (SMD) for the nation's grid.

Consequently, it is critical that Washington continue to work cooperatively with the variety of regional governmental, quasi-governmental, and private organizations.

Some of these key regional electricity institutions include the four-state NWPPC, the Western Governor's Association (WGA), specifically its energy organizations – the Western Interstate Energy Board (WIEB) and the Committee on Regional Electric Power Cooperation (CREPC), not to mention other specialized groups such as interstate utility organizations, electricity security coordinators, regional reliability councils, and state and provincial governments.

The challenge that Washington State faces is to balance state specific interests and needs with regional interests and needs. This balancing effort is even more acute as both the structure of the electricity system remains clouded and governmental roles and responsibilities are in dispute. For example, will the northwest-wide RTO- West be created? If so, when and in what final form? How do we deal with interstate transmission issues in the interim? What role will the federal government play in controlling the system? These are merely some of the types of questions that Washington State energy policy will have to grapple with over the next several years.

Guiding Principle #12

Promote policies and programs that provide access to basic energy services to those on limited incomes.

Low-income individuals pay a higher proportion of their income for energy services. For nearly three decades the federal government has provided energy support to low-income populations through programs such as the Low-Income Home Energy Assistance Program (LIHEAP) and

Weatherization. In addition, many utilities offer weatherization programs, discounted rates, financial assistance, or other services to their low-income customers. In 2001, Washington State appropriated $1 million in low-income energy assistance. Nonetheless, the state of Washington faces the challenge that the need for both bill assistance and weatherization services far outstrips state, utilities, or federal resources. Often less than one-quarter of the eligible population can be served. This disparity between need and available resource has grown worse. The major retail electricity price increases of 2001-02 coupled with high natural gas prices more than offset recent increases in federal, state, and utility support.

Looming budget shortfalls mean that the State will not have any new resources available to help out. Some other actions that the state and utilities can do include:

- Continue to urge our congressional delegation to support increased federal funding for LIHEAP and Weatherization.
- Encourage citizens to support Energy Matchmakers a program that matches individual's contributions with utility funds.
- Consider creative ways to support innovative utility assistance programs such as percentage of income caps on electricity expenditures
- Support efforts to analyze and quantify the costs of bill arrearages and utility shutoffs and the potential financial benefits of support programs.

Guiding Principle #13

Promote energy policies that maintain and or improve environmental quality.

It is widely acknowledged that the production and use of energy and electricity can have significant environmental impacts. The 1993 Strategy emphasized this by noting that "[e]nvironmental problems and their solutions are closely tied to how we develop and use energy." (p 33) CTED energy policy statutes specifically require that the development and use of energy resources shall be consistent with the statutory environmental policies of the state (RCW 43.21F.015 (3)). In addition, Governor Locke has established environmental improvement as one of his priority focus areas. In his statement of priority areas, the Governor specifically notes that salmon recovery, and improved water and air quality are priorities and that promotion of renewable energy is one of the strategies for achieving environmental objectives. (Gov's web page www.governor.wa.gov, Protecting Natural Resources)

The scope of energy/electricity and environmental issues is vast including:

- Climate warming
- Air pollution
- Water supply
- Water quality
- Habitat for fish and wildlife
- Implementation of environmental laws

Some of the key issues that will be considered by state and regional energy policy makers include:

- The scope of mitigation of greenhouse gas emissions, especially related to power plants.
- Fish and wildlife impacts of hydroelectric operation, mitigation requirements, and impacts on electricity supply.

- Local energy facility siting and land use considerations for technologies such as transmission lines and renewable energy projects.
- Development of specific standards for state power plant siting through the Energy Facility Site Evaluation Council (EFSEC).

GLOSSARY [TO BE COMPLETED]

- Load serving entity
- Integrated resource plan
- Obligation to serve
- Resource Portfolio
- Least cost planning/resource
- Federal Columbia River Power System
- Restructuring/Deregulation
- Open Retail Access
- Energy
- Capacity